

INDEX

TO THE

MATHEMATICAL GAZETTE

No. 293, FEBRUARY 1947—No. 297, DECEMBER 1947.

1. Articles.
2. Mathematical Notes.
3. Reviews and Notices.
4. News of Branches.
5. Gleanings Far and Near.
6. Correspondence.
7. Plates.
8. Miscellaneous.

ARTICLES.

AUTHOR.	TITLE.	PAGE.
B. C. Brookes.	The incorporation of statistics into a school course.	211
B. M. Brown.	Solution of differential equations by operational methods.	145
W. F. Bushell.	Presidential Address, 1947. A century of school mathematics.	69
N. Chater and W. J. Chater.	A chain rule for use with determinants and permutations.	279
H. Davenport.	The geometry of numbers.	206
D. J. Finney.	Statistical science and agricultural research.	21
H. G. Forder.	The cross and the foundations of euclidean geometry.	227
C. Gattegno.	Mathematics and the child.	219
R. L. Goodstein.	Commutative involutions.	224
R. L. Goodstein and M. Rumney.	Some new theorems on divisibility.	90
T. J. Hargest.	Optics and electron optics.	154
K. J. Le Conteur.	A geometrical minimum problem.	261
E. A. Maxwell.	Some properties of the nine-points circle.	266
H. E. Piggott and A. Steiner.	Isogonal conjugates.	130
M. Rumney.	See R. L. Goodstein.	

AUTHOR.	TITLE.	PAGE.
H. Simpson.	On the nodes of a rational plane curve.	161
C. A. B. Smith.	The counterfeit coin problem.	31
A. Steiner.	See H. E. Piggott.	
D. G. Taylor.	On certain configurations of congruent triangles.	270
J. A. Teegan.	Wave and classical mechanics.	258
N. Walls.	Careers for graduates in mathematics.	93
R. S. Williamson.	Dot, the Fairy: an introduction to decimals.	40
Geometrical drawing in the Higher School Certificate course in schools.		2
Discussion :		
W. G. Bickley (p. 2) ; S. Weikersheimer (p. 7) ; S. Chapman (p. 15) ; Mrs. E. M. Williams (p. 15) ; E. Barton (p. 15) ; B. J. Banner (p. 16) ; L. Ehrenberg (p. 16) ; A. W. Siddons (p. 17) ; A. Turner (p. 17) ; A. J. Hatley (p. 17) ; H. E. Piggott (p. 18) ; J. Logie (p. 18) ; Miss H. M. Cook (p. 18) ; S. Inman (p. 19) ; W. G. Bickley (p. 19).		
The place of visual aids in the teaching of mathematics.		193
Discussion :		
I. R. Vesselo (p. 193) ; G. P. Meredith (p. 196) ; J. Dickson (p. 198) ; Miss Moore (p. 198) ; A. K. French (p. 198) ; N. R. Eyres (p. 199) ; P. D. Greenall (p. 199) ; J. W. Ashley Smith (p. 199) ; S. E. Cruise (p. 200) ; L. R. B. Ehrenberg (p. 200) ; A. R. Pargeter (p. 200) ; A. W. Siddons (p. 201) ; A. H. Hall (p. 201) ; G. P. Meredith (p. 202) ; W. W. Sawyer (p. 203) ; W. F. Bushell (p. 204).		
Annual General Meeting, 1947.		65
Report of the Council for 1946.		66

MATHEMATICAL NOTES.

AUTHOR.	No.	TITLE.	PAGE.
F. Ayres.	1945	The expression of \sqrt{N} as a simple continued fraction.	45
R. H. Birch.	1961	On Note 1855.	112
F. Bowman.	1978	On Note 1825.	234
B. M. Brown.	1955	On the operator D .	167
J. H. Cadwell.	1987	Three integrals.	239
R. Cooper.	1947	On Note 1863.	49
L. Crawford.	1981	On Note 1862.	237
L. R. B. Ehrenberg.	1984	A special case of the general theorem of maxima and minima of n restricted variables.	238
D. F. Ferguson.	1946	Theorems on conics.	47
M. H. Freeman.	1983	On the rapid computation of squares.	237
P. Gant.	1999	The projection of a conic into a circle.	250
N. M. Gibbins.	1963	The Newton approximation.	113
R. L. Goodstein.	1967	Note on continuity.	164
	1968	A note on identities.	165
P. L. Goodwin.	2002	Proofs of two trigonometrical identities.	254
R. Goormaghtigh.	1949	A circle connected with a triangle.	102
J. B. S. Haldane.	1986	Tests for divisibility.	239
H. N. Haskell.	1959	Note on Pythagoras' theorem.	110
	1966	On the solution of a triangle given two sides and the included angle.	164
T. H. Ward Hill.	1992	Application of an identity in elementary algebra.	244

INDEX

v

AUTHOR.	No.	TITLE.	PAGE.
T. H. Ward Hill.	1993	The equation, in areal coordinates, to the circle circumscribed to the triangle of reference.	244
	1994	The equation to the line of action of the resultant of a system of co-planar forces.	245
M. Hutton.	1962	On Newton's method.	113
C. D. Langford.	1985	Tests of divisibility.	239
D. E. Littlewood.	1950	On Note 1844.	104
E. H. Lockwood.	1969	Volume, to a given depth, of a cylindrical tank with spherical caps as ends.	166
H. V. Lowry.	1960	A construction for the length of an arc of a circle.	112
	1997	Elementary derivation of the Euler-Maclaurin summation formula.	248
	1998	Euler's transformation of alternating series.	249
J. P. McCarthy.	1979	An area and a volume.	235
E. H. Mansfield.	1965	An identity in continued fractions.	115
J. I. Mason.	1973	On Euclid VI. 3.	171
F. G. Maunsell.	1976	"Why does a bicycle keep upright?"	173
E. A. Maxwell.	1954	Note.	107
S. Melmore.	1953	A single-sided doubly collapsible tessellation.	106
E. H. Neville.	1951	On Note 1862.	104
	1971	The Brocard angle.	169
	1990	A sensational descent.	243
	1991	Acute or obtuse?	244
S. Parameswaran.	1958	A peculiar reversion of numbers.	110
	1974	Right circular cone.	171
D. K. Picken.	1972	On Notes 1727 and 1842 (with 605): "Extension of Simson's line".	170
	2000	On differentials.	252
E. G. Phillips.	1970	On the positive and negative sides of a line.	168
H. E. Piggott.	1957	Notes on the geometry of the triangle.	108
M. A. Porter.	1982	The missing clue.	237
J. G. Skellam.	1964	Bernoulli's and Euler's numbers.	115
C. A. B. Smith.	1995	On the definition of logarithms.	246
R. H. Smith.	1952	An experiment on motion on a rough inclined plane.	105
B. Spain.	2001	On the calculation of radii of gyration.	252
A. K. Srinivasan.	2003	Recurrence formulae for Legendre functions.	255
V. Thébault.	1943	A propos de deux théorèmes de Faure.	43
	1944	Sur un théorème de Weill-Aiyar.	44
F. J. Tongue.	1996	The logarithm function.	247
P. C. Unwin.	1980	On Note 1862.	236
S. Vajda.	1975	Shortcutting in multiplication on a calculating machine.	172
P. Vermes.	1988	A real matrix representing an equilateral polygon in general euclidean space.	240
	1989	Diameter-closed sets.	241
C. Walmsley.	1956	Exponential, logarithmic and circular functions.	107
T. J. Willmore.	1942	Note on a paradox in Routh's <i>Analytical Dynamics</i> .	42
	1977	Higher mathematics and numerical computation.	234
EDITORIAL.	1948	On Note 1882.	50

REVIEWS AND NOTICES.

AUTHOR.	TITLE.	REVIEWER.	PAGE.
J. Aharoni.	Antennae, an introduction to their theory.	N. W. McLachlan.	187
A. A. Albert.	College algebra.	D. B. Scott.	61
W. A. Bagley.	What's your opinion?	T. A. A. B.	63
H. F. Baker.	A locus with 25,920 linear self-transformations.	D. B. Scott.	118
E. T. Bell.	The magic of numbers.	A. Prag.	304
G. Bossom.	See W. P. Workman.		
A. Bouwers.	Achievements in optics.	A. Burton.	312
P. P. Boyd and H. H. Downing.	A brief course in analytic geometry.	A. Robson.	295
J. Chazy.	Cours de mécanique rationnelle. I. Dynamique du point matériel {3}.	T. A. A. B.	120
W. K. Clifford.	The common sense of the exact sciences {New ed.}.	T. A. A. B.	119
H. H. Downing.	See P. P. Boyd.		
C. V. Durell.	General mathematics. III.	K. S. Snell.	316
Sir A. S. Eddington.	Fundamental theory.	W. H. McCrea.	288
Ky Fan.	See M. Fréchet.		
E. Ford.	David Rittenhouse.	W. M. Smart.	117
M. Fréchet et Ky Fan.	Introduction à la topologie combinatoire.	S. T. Hu.	177
R. Fueter.	Analytische Geometrie der Ebene und des Raumes.	D. Pedoe.	118
S. H. Glenister.	Builders' Calculations {2}. See also I. R. Vesselo.	E. J. Atkinson.	189
C. Godfrey and A. W. Siddons.	Four-figure tables {New ed.}.	T. A. A. B.	192
A. de Gramont.	Vers l'infiniment petit.	W. H. McCrea.	119
E. L. Grant.	Statistical quality control.	F. Sandon.	122
L. M. Graves.	The theory of functions of real variables.	J. H. Pearce.	184
D. R. Hartree.	Calculating machines. Recent work and prospective developments.	B. M. Brown.	176
H. F. Hemstock.	Essentials of business arithmetic.	E. J. Atkinson.	189
H. and B. S. Jeffreys.	Methods of mathematical physics.	E. T. Copson.	174
A. Keith.	See N. McArthur.		
M. G. Kendall.	The advanced theory of statistics. II.	F. Sandon.	126
C. J. Keyser.	Collected works. I. Mathematics as a culture clue.	H. G. Forder.	304
J. H. Lambert.	Opera Mathematica. I. 1. Commentationes arithmeticae, algebraicae et analyticae.	T. A. A. B.	121
A. Läuchli und F. Müller.	Physikalische Aufgabensammlung.	G. F. Nicholson.	64
E. H. Lockwood.	See A. W. Siddons.		
N. McArthur and A. Keith.	Intermediate algebra {2}.	F. W. Kellaway.	62

INDEX

vii

	AUTHOR	TITLE.	REVIEWER.	PAGE.
	N. W. McLachlan.	Theory and application of Mathieu functions.	<i>T. V. Davies.</i>	300
187	J. Maclean.	Descriptive mathematics {2}.	<i>H. V. Lowry.</i>	188
61	T. M. MacRobert.	Functions of a complex variable {3}.	<i>F. Bowman.</i>	295
63	E. A. Maxwell.	The methods of plane projective geometry based on the use of general homogeneous coordinates.	<i>A. Robson.</i>	58
118				
304	R. R. Middlemiss.	Differential and integral calculus {2}.	<i>F. W. Kellaway.</i>	62
	L. J. Mordell.	A chapter in the theory of numbers.	<i>H. Davenport.</i>	292
312	M. Morland.	Introduction mathématique aux théories physiques modernes. I. Nombres complexes, nombres hypercomplexes, matrices, opérateurs, applications élémentaires.	<i>D. E. Rutherford.</i>	305
295				
20	J. Morris.	The escalator method in engineering vibration problems.	<i>W. G. Bickley.</i>	311
19	F. Müller.	See A. Läuchli.		
	F. D. Murnaghan.	Differential and integral calculus.	<i>R. L. Goodstein.</i>	296
16	F. J. Murray.	The theory of mathematical machines.	<i>W. H. Ingram.</i>	306
88	H. O. Newbould.	Analytical method in dynamics.	<i>H. R. Hassé.</i>	54
	G. H. R. Newth.	Shorter school arithmetic.	<i>S. Inman.</i>	317
17	A. Ostrowski.	Vorlesungen über Differential- und Integralrechnung. I.	<i>T. A. A. B.</i>	60
77	N. G. Parke.	Guide to the literature of mathematics and physics.	<i>T. A. A. B.</i>	305
18	S. Piccard.	Sur les bases du groupe symétrique et les couples de substitutions qui engendrent un groupe régulier.	<i>O. Tausky.</i>	187
89				
	G. de B. Robinson.	The foundations of geometry {2}.	<i>H. G. Forder.</i>	303
92	A. Robson.	An introduction to analytical geometry. II.	<i>E. A. Maxwell.</i>	292
19	A. W. Siddons, K. S. Snell and E. H. Lockwood.	A new arithmetic.	<i>S. Inman.</i>	190
22		See also C. Godfrey.		
84	D. E. Smith.	The poetry of mathematics {2}.	<i>T. A. A. B.</i>	192
76	T. L. Smith.	See W. J. Sternberg.		
89	K. S. Snell.	See A. W. Siddons.		
74	R. V. Southwell.	Relaxation methods in theoretical physics.	<i>W. G. Bickley.</i>	55
	W. J. Sternberg and T. L. Smith.	The theory of potential and spherical harmonics {2}.	<i>T. A. A. B.</i>	303
26				
04	S. A. Stigant.	Modern electrical engineering mathematics.	<i>L. M. Harvey.</i>	310
21	W. J. Stone.	Building geometry.	<i>A. Buxton.</i>	127
	W. L. Sumner.	The teaching of arithmetic and elementary mathematics {2}.	<i>W. F. Bushell.</i>	314
44		The teaching of science {3}.	<i>W. F. Bushell.</i>	314
	L. H. C. Tippet.	Statistics (Rep.).	<i>F. Sandon.</i>	302
32	E. C. Titchmarsh.	Eigenfunction expansions associated with second-order differential equations.	<i>E. T. Copson.</i>	51

AUTHOR.	TITLE.	PAGE.
H. W. Turnbull.	The theory of matrices, determinants and invariants {2}.	<i>D. E. Littlewood.</i> 176
I. R. Veselo and S. H. Glenister.	Examples in engineering mathematics. II.	<i>E. J. Atkinson.</i> 317
C. E. Weatherburn.	A first course in mathematical statistics.	<i>F. Sandon.</i> 125
H. Webb.	Logarithms made easy.	<i>L. M. Hurvey.</i> 63
A. Weil.	Foundations of algebraic geometry.	<i>D. Pedoe.</i> 293
Sir E. T. Whittaker.	Space and spirit.	<i>E. Cunningham.</i> 117
D. V. Widder.	Advanced calculus.	<i>R. L. Goodstein.</i> 298
W. P. Workman.	Tutorial arithmetical {4}: revised by G. Bossom.	<i>S. Inman.</i> 191
R. C. Yates.	Tools. A mathematical sketch and model book.	<i>D. Pedoe.</i> 186
E. Zwinggi.	Versicherungsmathematik.	<i>H. Freeman.</i> 185
Annals of the Computation Laboratory of Harvard University.		<i>J. C. P. Miller.</i> 178
1.	A manual of operation for the automatic sequence controlled calculator.	
2.	Tables of the modified Hankel functions of order one-third and of their derivatives.	
3.	Tables of the Bessel functions of the first kind of orders zero and one.	
4.	Tables of the Bessel functions of the first kind of orders two and three.	
The Mathematical Tables Project.		<i>J. C. P. Miller.</i> 181
Tables of fractional powers.		
Tables of spherical Bessel functions.		
Table of the first ten powers of the integers from 1 to 1000.		
Portraits of eminent mathematicians. I. {2}. With notes by D. E. Smith.		<i>I. R. Veselo.</i> 318
Proceedings of the first Canadian Mathematical Congress, Montreal, 1945.		<i>T. A. A. B.</i> 302
The Royal Society Newton Tercentenary Celebrations.		<i>T. A. A. B.</i> 291
Studies in Science. Edited by W. C. Coker.		<i>T. A. A. B.</i> 63
Notices of films.		98, 319
Notices of film strips.		318

BRANCHES.

REPORTS AND NEWS.

	PAGE.		PAGE.
Birmingham University	i	North-Eastern	xv
Bristol	i	Northern Ireland	vii
King's College, London	ii	Plymouth	iv
Liverpool	xiii	Queensland	ix
London	xiii	Southampton	viii
Manchester	xiv	Sheffield	xvi
Midland	iii	Victoria	ix
New South Wales	vii	Yorkshire	v

INDEX

ix

GLEANINGS FAR AND NEAR.

PAGE.	No.	PAGE.	No.	PAGE.	No.
20	1511-6	97	1530-4	218	1544-5
30	1517-9	116	1535	223	1546
39	1520-1	144	1536	226	1547
41	1522-4	153	1537-9	233	1548-50
64	1525-8	160	1540-1	269	1551-2
92	1529	192	1542-3		

CORRESPONDENCE.

PAGE.

F. E. Cave.	W. K. Clifford.	256
I. FitzRoy Jones.	" Isosceles ".	163
S. Vajda.	Projective geometry.	128
T. G. C. Ward.	Complex number phraseology.	163

PLATES.

FACING PAGE.

The first English Euclid.	1
Warin Foster Bushell.	65
" The Grounde of Artes ".	129
Visual Aids Exhibition.	193, 200, 201
Rawdon Levett.	257

MISCELLANEOUS.

PAGE.

Back numbers of the <i>Gazette</i> .	89
Bureau for the solution of problems.	68, 320
The <i>Australian Mathematics Teacher</i> .	89
General Meeting, 1948.	223
Summer School in relaxation methods.	iii
<i>Eureka</i> .	265
<i>Nachrichten der Mathematischen Gesellschaft, Wien</i> .	265
Supplement to <i>School Library List</i> .	xi